

3378

JOURNAL
OF THE
AMERICAN GEOGRAPHICAL SOCIETY
OF
NEW YORK

MDCCCXCIX



VOL. XXXI

NEW YORK
PRINTED FOR THE SOCIETY

~~93/20~~

G-12

A 512 b₁

v. 31

CONTENTS.

	<small>PAGE</small>
List of Officers and Councillors.....	v
Honorary and Corresponding Members and Fellows.....	401
Physical Geography of New York State. By R. S. TARR.....	1, 101, 217, 315, 417
Hawaiian Ethnography. By TITUS MUNSON COAN.....	24
The Ruined City of Copan. By GEORGE BYRON GORDON.....	39
A Letter from Mr. E. WHYMPER.....	75
The Timber Line. By HENRY GANNETT.....	118
The Navy as a Motor in Geographical and Commercial Progress. By G. W. LITTLEHALES.....	123
Communication from Prof. GEORGE DAVIDSON.....	150
Seventh International Geographical Congress.....	151, 282, 490
The Granites of Carbon County, Montana: A Division and Glacier Field of the Snowy Range. By J. P. KIMBALL.....	199
The Development of the Hanse Towns in Relation to their Geographical Environment. By ELLEN C. SEMPLE.....	236
Bibliography of Geographical Works published in the United States in 1898. By J. M. BOUTWELL.....	299
The Harriman Alaska Expedition. By HENRY GANNETT.....	344
Palestine as Illustrating Geological and Geographical Controls. By REGINALD A. DALY.....	444
Anthropology, Notes on. By ROLAND B. DIXON.....	60, 180, 264, 464
Climatology, Notes on. By ROBERT DE C. WARD.....	160, 268, 367, 481
Geographical Education, Notes on. By R. E. DODGE.....	382, 485
Meteorology, Notes on. By ROBERT DE C. WARD.....	31
Oceanography, Notes on. By WILLIAM LIBBEY.....	72, 163, 356, 459
Physiographic Notes. By R. S. TARR.....	35, 156, 256, 360, 476
Record of Geographical Progress.....	51, 171, 272, 371, 469
Washington Letter.....	65, 184
Presentation of the Cullum Medal to Sir JOHN MURRAY.....	283
Alaskan and Insular Surveys.....	503
Map Notices.....	78, 261, 363, 493
Book Notices.....	80, 285, 390, 506
Accessions to the Library.....	87, 191, 290, 387, 499
Obituaries.....	96, 196, 397, 398
Notes and News.....	91, 193, 294, 514
Transactions of the Society.....	97, 197, 515
Index.....	517

AMERICAN GEOGRAPHICAL SOCIETY.

OFFICERS AND COUNCILLORS,

1899.

OFFICERS:

PRESIDENT

CHARLES P. DALY, LL.D.

Term expires 1900

VICE-PRESIDENTS

W. H. H. MOORE

Term expires 1900

GEN. EGBERT L. VIELE

Term expires 1901

C. C. TIFFANY, D.D.

Term expires 1902

FOREIGN CORRESPONDING SECRETARY

PROF. W. LIBBEY

Term expires 1900

DOMESTIC CORRESPONDING SECRETARY

CHANDLER ROBBINS

Term expires 1902

RECORDING SECRETARY

ANTON A. RAVEN

Term expires 1901

TREASURER

WALTER R. T. JONES

Term expires 1900

COUNCILLORS

FRANCIS M. BACON
AUSTEN G. FOX

ALEXIS A. JULIEN
S. NICHOLSON KANE

JOHN A. HADDEN
LEVI HOLBROOK

D. O. MILLS

Terms expire 1900

MORRIS K. JESUP
GUSTAV E. KISSEL

HENRY PARISH

Terms expire 1901

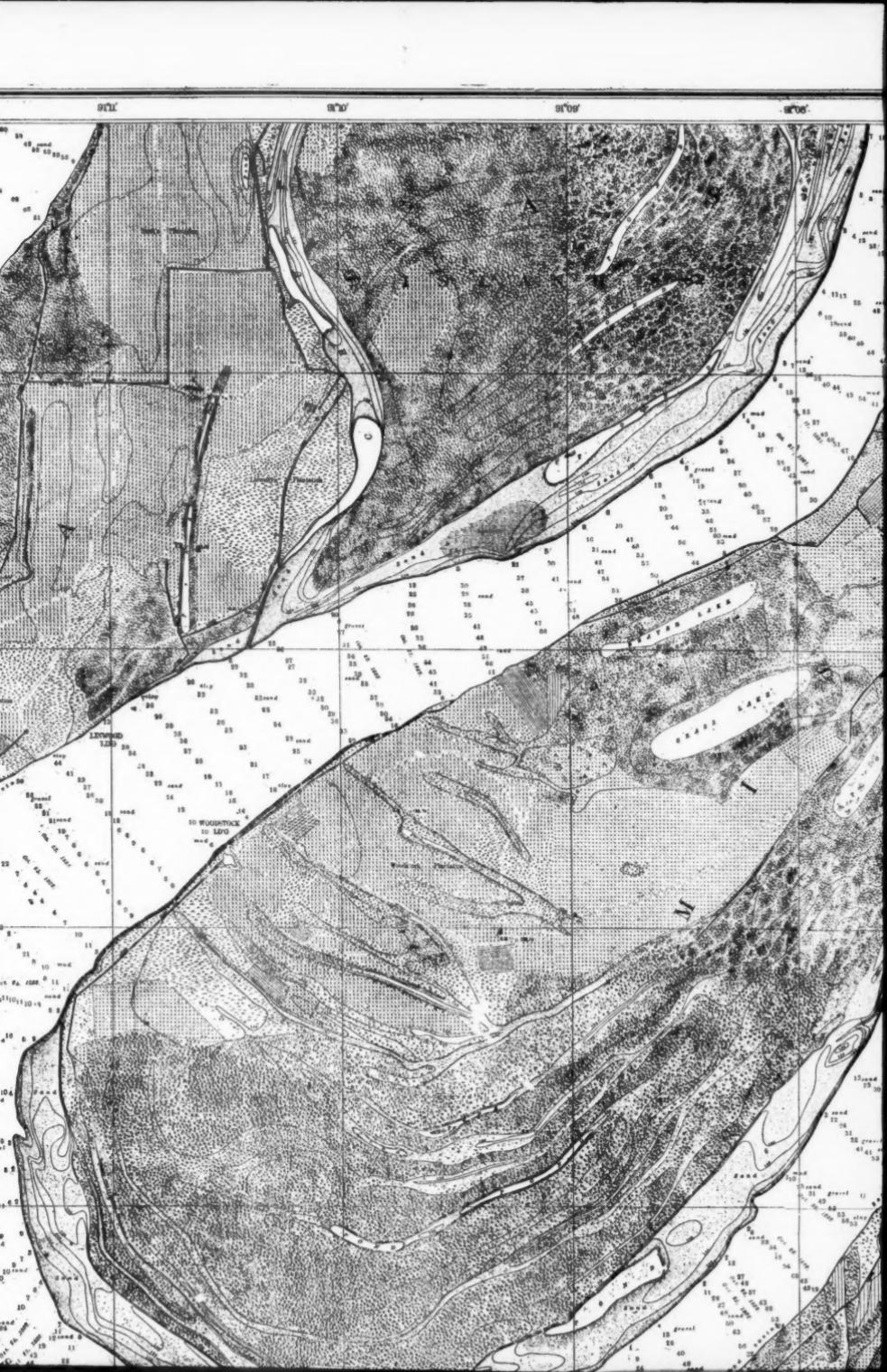
Rear-Adm. BANCROFT GHERARDI, U.S.N.
WM. G. HAMILTON

HENRY HOLT
CLARENCE KING

CHARLES A. PEABODY

Terms expire 1902

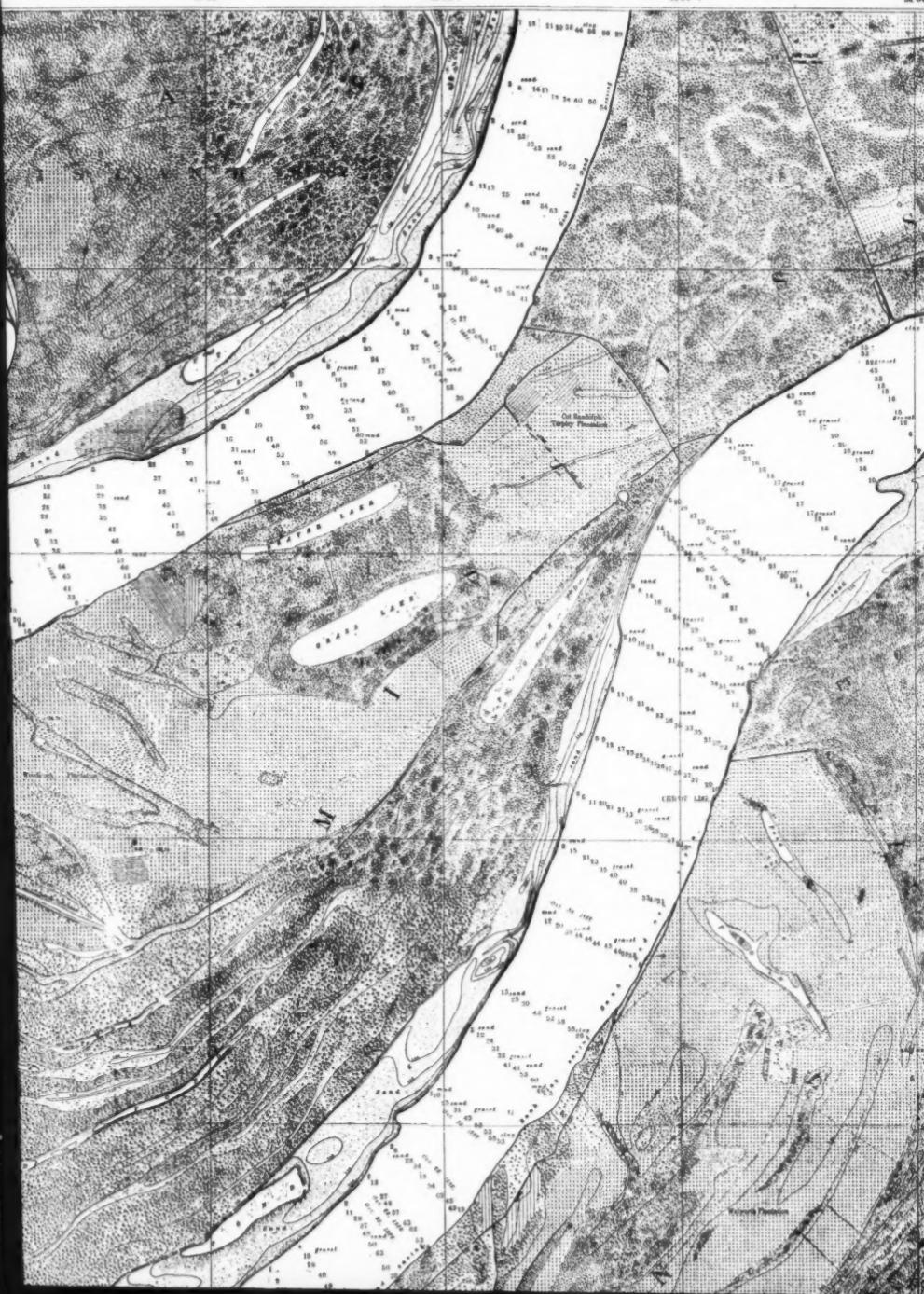




90°09'

90°05'

90°07'





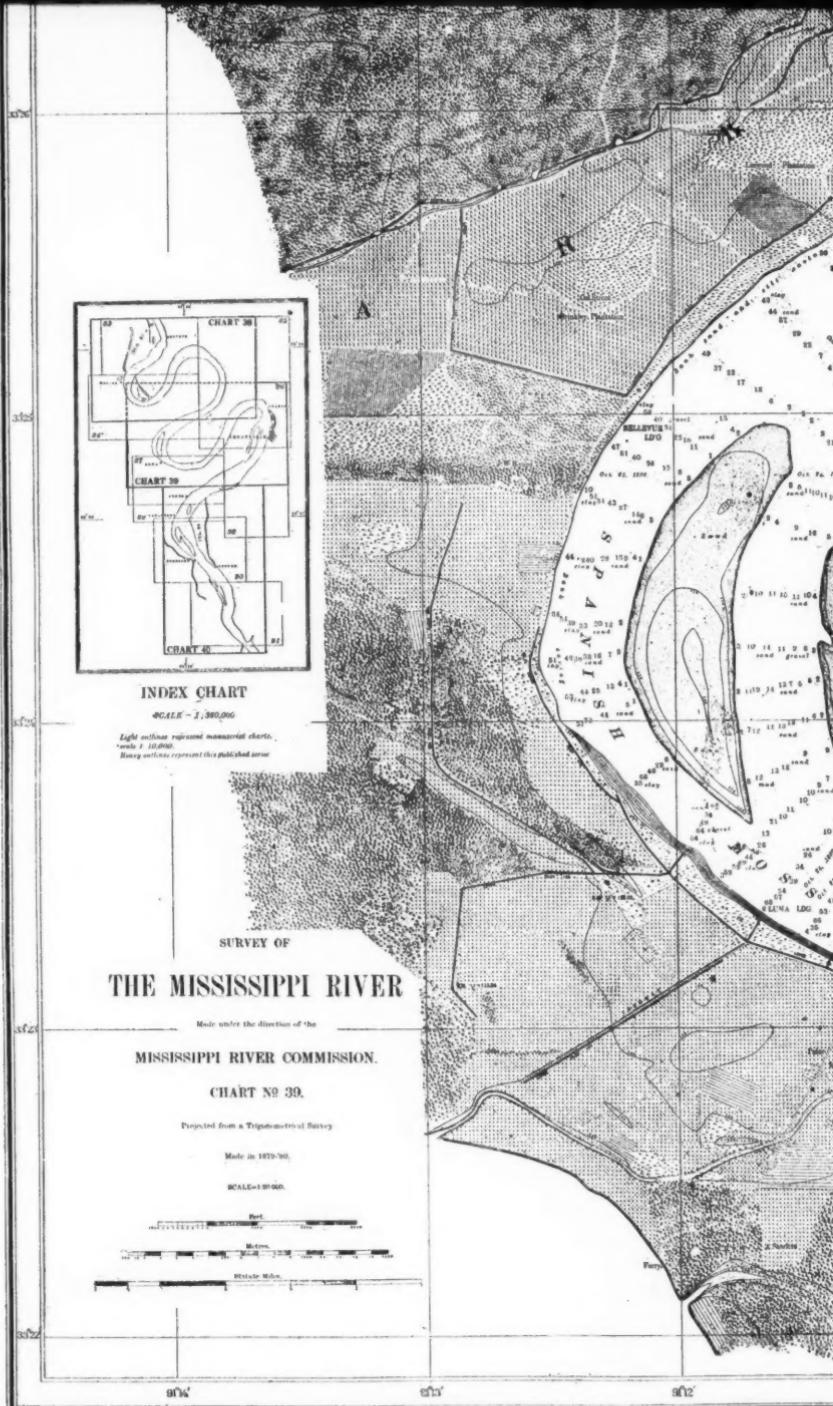
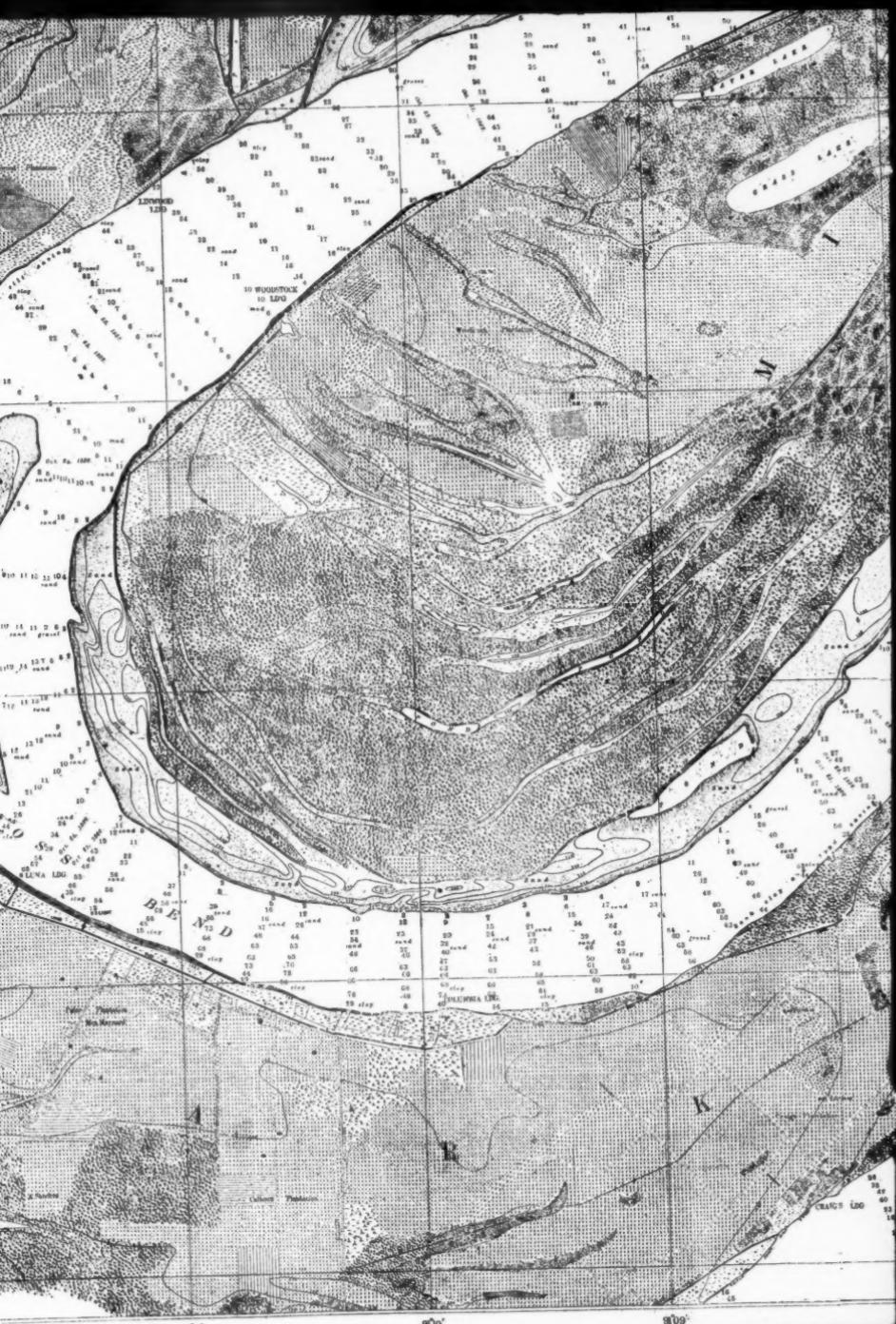
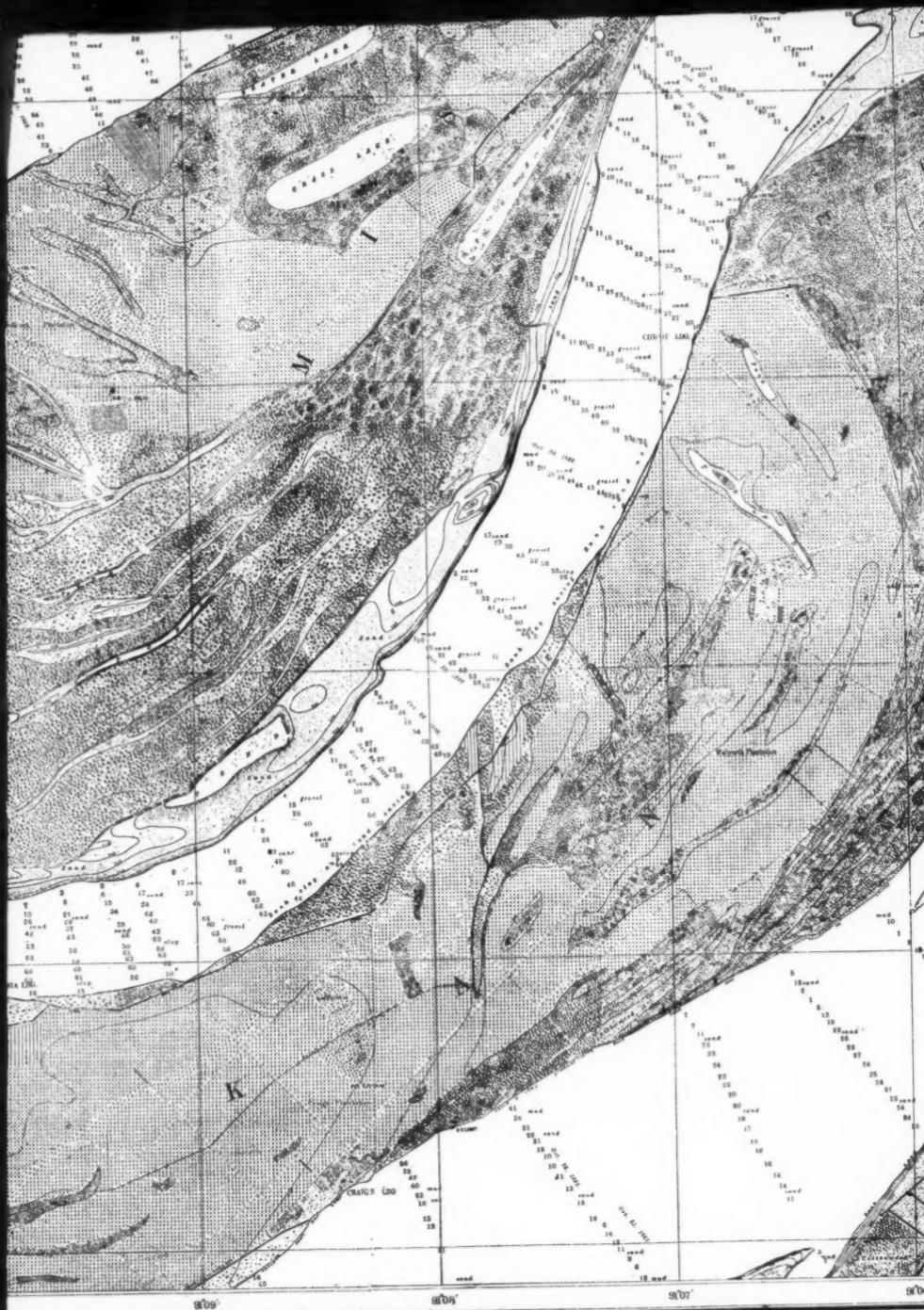
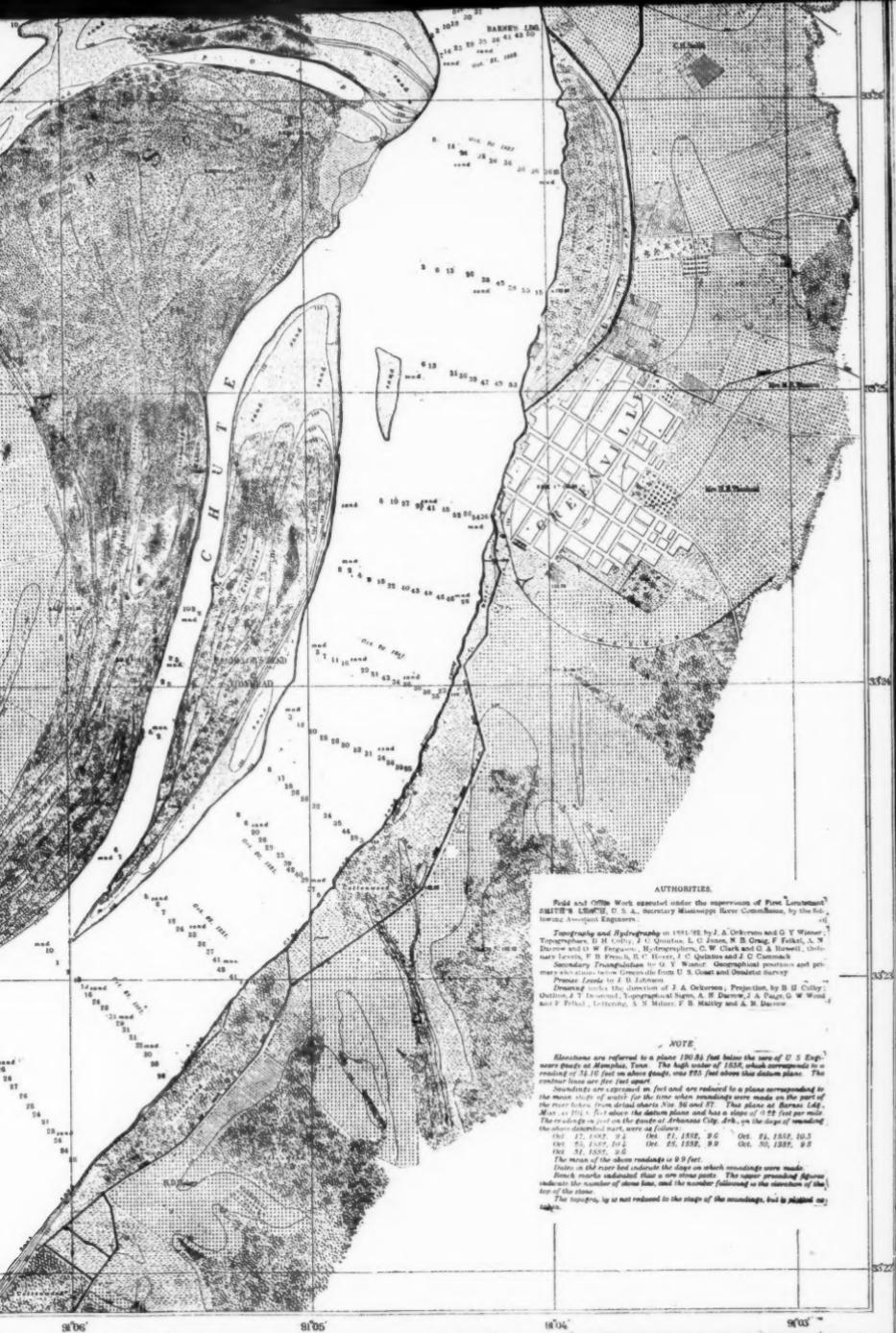


FIG. I.







SURVEY OF
THE MISSISSIPPI RIVER

Made under the direction of the
MISSISSIPPI RIVER COMMISSION.

CHART NO. 35.

Projected from a Trigonometrical Survey

Made in 1879-'80.

SCALE = 1:30,000.



AUTHORITIES

Field and Office Work executed under the supervision of First Lieutenant SMITH D. LEIGH, U. S. A., Secretary Mississippi River Commission, by the following Assistant Engineers:

Topography and Hydrography in 1879-'80: J. A. Orkeman in charge; Topographers, C. M. Winchell, B. H. Colly, H. H. Bassell and E. D. Thompson; Hydrographers, C. W. Clark and H. B. Wood, Orkeman, L. C. Jones and G. V. Morrison.

Boundary Trigonometry (1879-'80): G. W. Morrison, H. T. Blunt and G. Y. Warner.

Projecting: J. A. Paye, R. D. Evans and J. D. Clegg.

Drawing under the direction of J. A. Orkeman; Projection, B. H. Colly and A. H. Harrow; Outlines, H. B. Wood and C. W. Thompson; Topographical Signs, J. A. Paye, A. H. Dawson and C. W. Clark; Lettering, H. B. Wood and F. B. Mayby.

NOTE.

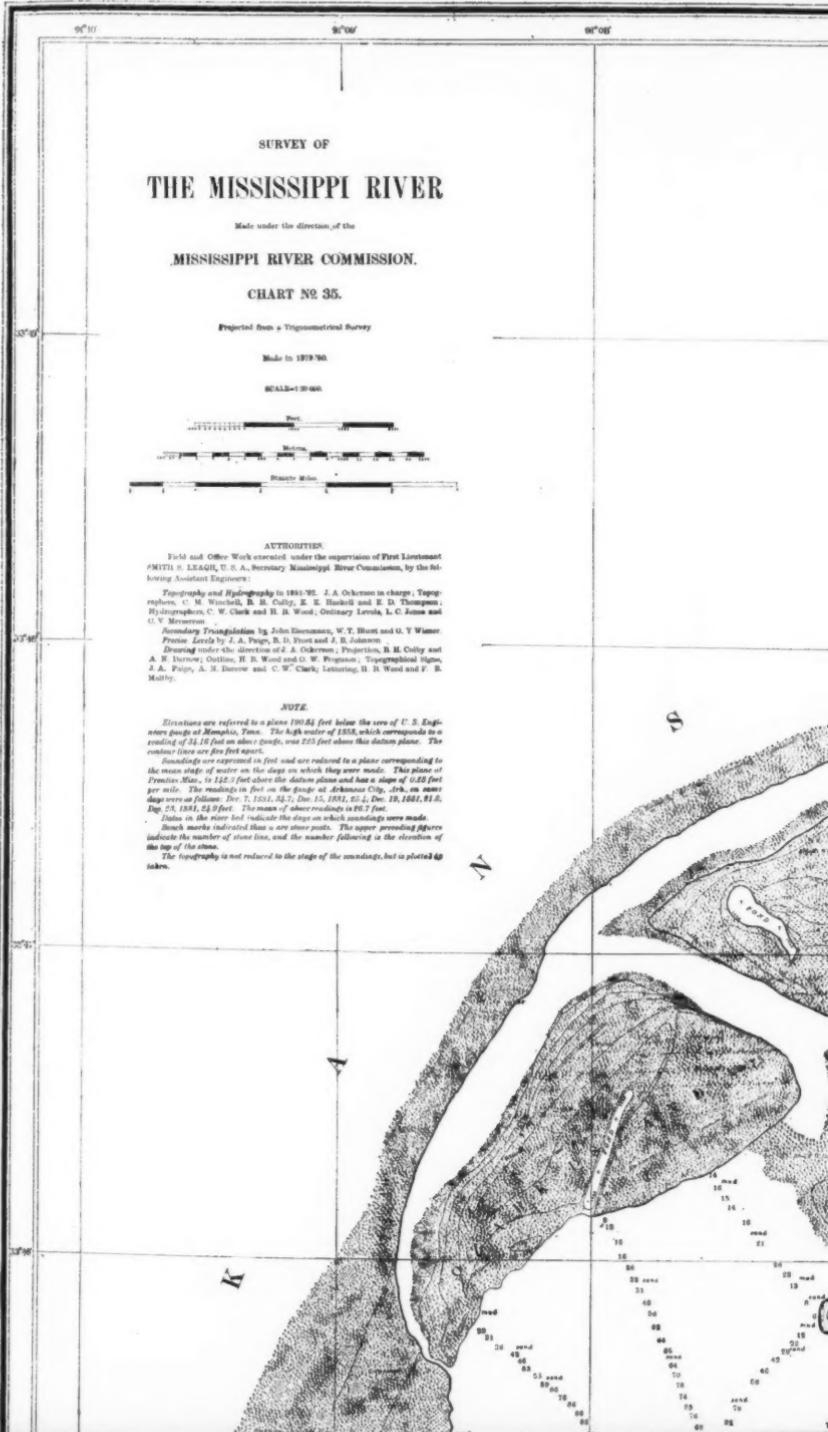
Elevations are referred to a plane 190.84 feet below the zero of U. S. Engineers' gauge at Memphis, Tenn. The high water of 1858, which corresponds to a reading of 100.00 on the gauge, was 223 feet above this datum plane. The elevations are first foot marks.

Boundaries are expressed in feet and are reduced to a plane corresponding to the mean stage of river at the date when they were made. The mean stage of the river is 14.4 feet above the datum plane, or a stage of 103.84 feet per mile. The readings in feet on the gauge at Arkansas City, Ark., on most days were as follows: Dec. 7, 1881, 13.7; Dec. 15, 1881, 13.4; Dec. 19, 1881, 13.8; Dec. 23, 1881, 13.9; Dec. 27, 1881, 13.7; Dec. 31, 1881, 13.6.

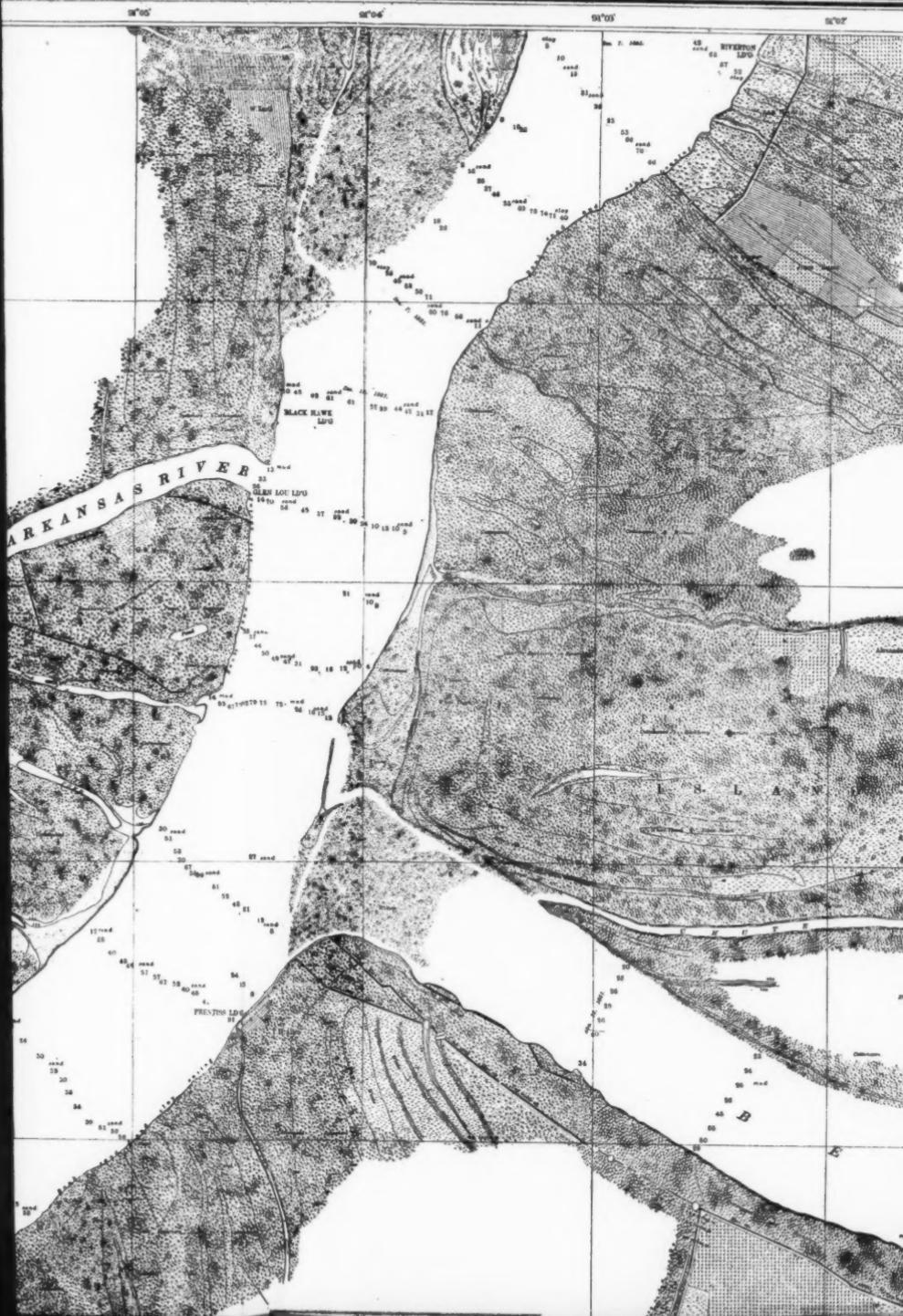
Dates in the river bed indicate the days on which soundings were made.

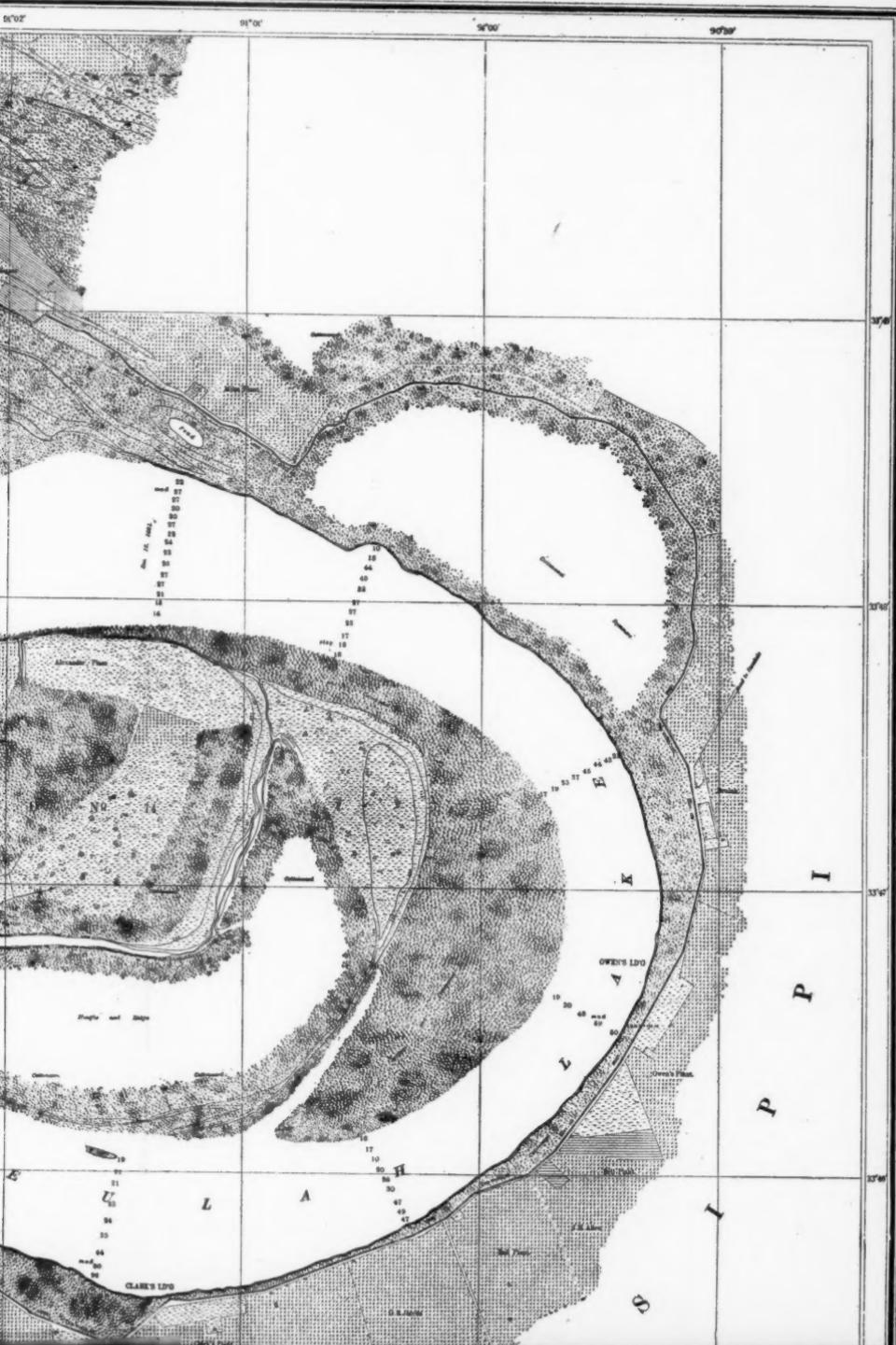
Depth marks indicated by a are shore points. The upper preceding figures indicate the elevation of shore line, and the number following is the elevation of the top of the shore.

The topography is not reduced to the stage of the soundings, but is plotted off scales.









AUTOMATION

Field and Office Work executed under the supervision of First Lieutenant SMITH & LEARNE, U. S. A., Surveyor, Mississippi River Commission, by the following members of the Survey:

Topography and Hydrography in 1881-82: J. A. Oehrensen in charge; Topographers, C. M. Winchell, B. H. Colby, H. E. Hatchell and E. D. Thompson; Hydrographers, C. W. Clark and H. H. Wood; Ordinary Levels, J. C. Jones and G. V. Morris; Secondary Levels, G. V. Morris.

Secondary Triangulation by John Elsnermann, W. T. Hunt and G. Y. Wager; Precise Levels by J. A. Paige, B. D. Frost and B. Johnson.

Topographic Survey in 1883-84: Projector, H. M. Colby; Topographers, A. H. Durrow, Goffill, H. H. Wood and G. W. Pease; Topographical Signs, J. A. Paige, A. H. Durrow and C. W. Clark; Lettering, H. H. Wood and F. B. Maitly.

NOTE.

Elevations are referred to a plane 1000.00 feet below the zero of U. S. Ruling gauge at Memphis, Tenn. The zero of water of 1855, which corresponds to a reading of 41.10 feet on above gauge, was 203 feet above this datum plane. The contour lines are five feet apart.

Distances are given in feet and are reduced to a plane corresponding to the mean stage of water on the days on which they were made. This plane of Precise Measurement is 132.5 feet above the datum plane and has a slope of 0.85 feet per mile. The mean stage of water on the days of the observations of the contour lines was as follows: Dec. 7, 1881, 33.7; Dec. 15, 1881, 62.4; Dec. 19, 1881, 61.8; Dec. 25, 1881, 54.9 feet. The mean of above readings is 61.7 feet.

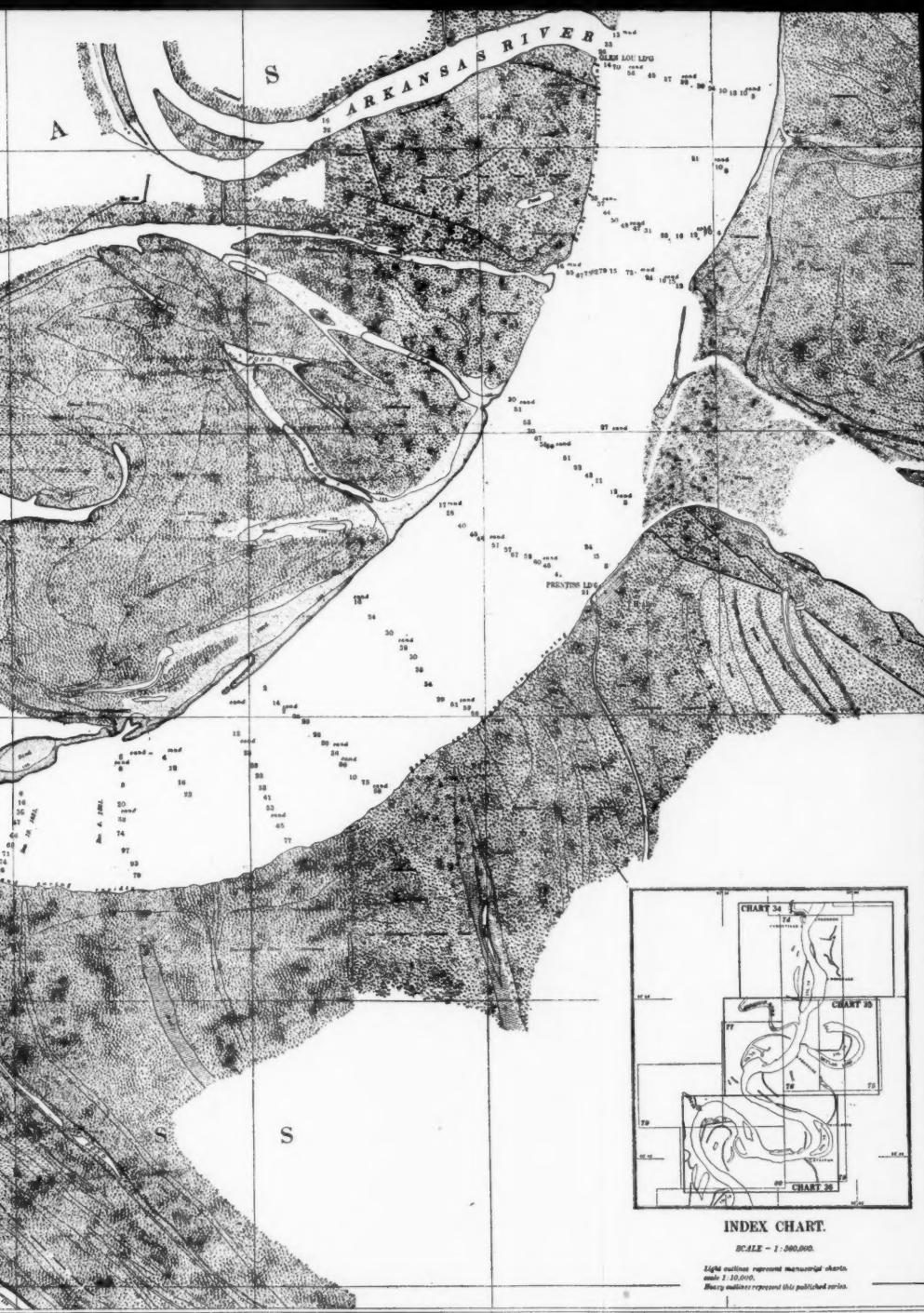
Vertical exaggeration of the contour lines is 1.05 times the mean stage.

Final results indicated that a few three parts. The upper preceding figures indicate the number of staves, and the number following is the elevation of the top of the staves.

The topography is not reduced to the stage of the soundings, but is plotted at table height.



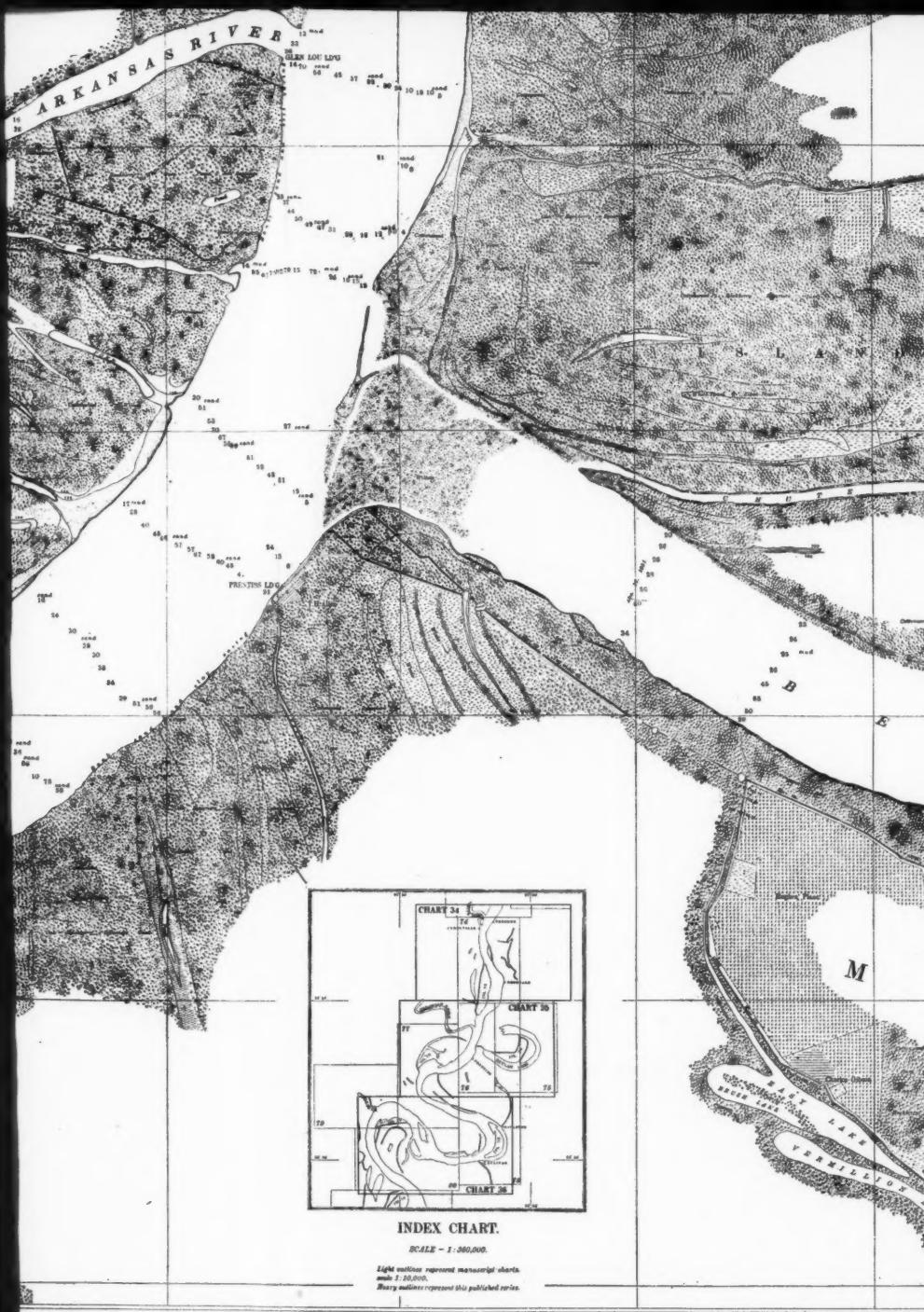
FIG. 2.



INDEX CHART.

SCALE - 1:500,000.

Light outlines represent nautical charts
made 1:10,000.
Blue outlines represent this published series.



INDEX CHART.

SCALE - 1:360,000.

*Light outlines represent manuscript charts.
Solid 3:10,000.
Heavy outlines represent this published series.*

XUM

